

49.7  
A1  
end

e) etching the resistive layer to define a resistive heater, wherein the resistive heater is disposed beneath the heater interconnect and has a second width larger than the first width.

62.5.7

9. (Amended) A method for making a resistive heater for an active planar lightwave circuit, the method comprising the steps of:

- A2
- a) depositing a tungsten resistive layer on a top clad of a planar lightwave circuit;
  - b) depositing an aluminum interconnect layer onto the resistive layer such that the tungsten resistive layer functions as an adhesion layer for the aluminum interconnect layer;
  - c) etching the aluminum interconnect layer to define a heater interconnect, wherein the heater interconnect is disposed over the tungsten resistive layer and has a first width;
  - d) masking the heater interconnect; and
  - e) etching the tungsten resistive layer to define a resistive heater, wherein the resistive heater is disposed beneath the heater interconnect and has a second width larger than the first width.

62.5.7  
A3

17. (Amended) A method for making a thermo-optic resistive heater for an active planar lightwave circuit, the method comprising the steps of:

- a) depositing a tungsten layer on a top clad of a planar lightwave circuit;
- b) depositing an aluminum layer onto the tungsten layer such that the tungsten layer functions as an adhesion layer for the aluminum layer;

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c) masking a region of the aluminum layer to be subsequently defined as a heater interconnect;

d) etching the aluminum layer to define the heater interconnect, wherein the heater interconnect is disposed over the tungsten layer and has a first width;

e) masking the heater interconnect and masking a region of the tungsten layer to be subsequently defined as a resistive heater; and

f) etching the tungsten resistive layer to define the resistive heater, wherein the resistive heater is disposed beneath the heater interconnect and has a second width larger than the first width.

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